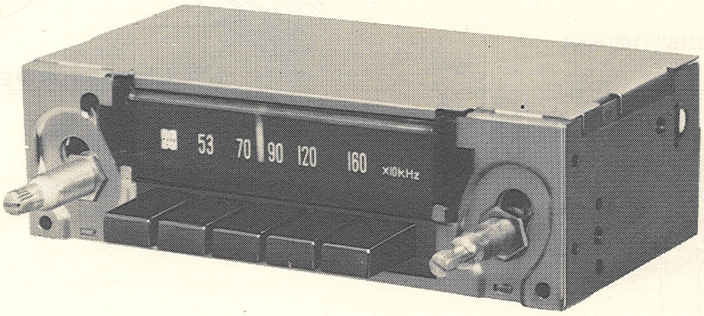
No. 80077

CAR RADIO SERVICE MANUAL

CUSTOM-MADE FOR TOYOTA DYNA AND HIACE

TOYOTA PART NO. 86120-95A00 (TUNER ASS'Y, RADIO MODEL CR-5467.T)



MODEL
CR-5467.T

AM 5-PUSHBUTTON SOLID STATE CAR RADIO

SPECIFICATIONS*

Frequency Range:	530 ~ 1605 kHz
Intermediate Frequency:	450 kHz
Sensitivity:	20 dB/μV
Power Output:	Continuous; 3.2 W (at 10% THD) Maximum; 4.0 W (Volume at max. & Tone in the treble) (Conditions; at 400 Hz 4 Ω load, DC 13.2 V)
Power Supply Voltage:	DC 12 V (11 ~ 16 V), Negative Ground
Power Consumption:	Approx. 5.3 W (0.4 A at 0.5 W ouput, DC 13.2 V)
Speaker Impedance:	4 Ω
ICs:	2
Diodes:	3
Dimensions**:	Width; 6-5/16" (160 mm) Height; 1-7/8" (48 mm) Depth; 3-5/32" (80 mm)
Weight**:	1.8 lbs (0.8 kg)

FEATURES

- AM 5-pushbutton and manual tuning car radio with 4-7/8" (124 mm) pitched shafts.
- Custom-made for TOYOTA DYNA and HIACE.
- DC 12 V, Negative ground.
- Sensitive superheterodyne system using One-chipped IC on AM circuit.
- A. G. C. (Automatic Gain Control).
- Easy-to-adjust antenna trimmer.

*Specifications subject to change without notice.
**Weight and Dimensions shown are approximate.

TOYOTA MOTOR SALES CO., LTD.

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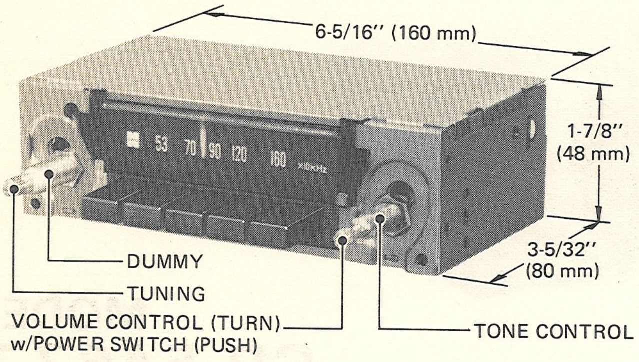
DIMENSIONS AND LOCATION OF CONTROLS



6-5/16" (160 mm)
1-7/8" (48 mm)
3-5/32" (80 mm)
53 70 90 120 160 x10kHz
DUMMY
TUNING
VOLUME CONTROL (TURN)
w/POWER SWITCH (PUSH)
TONE CONTROL

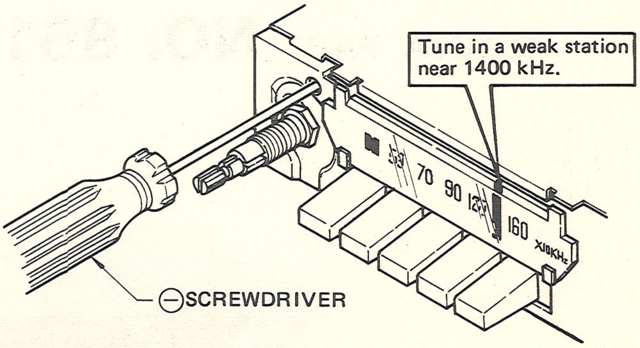
- ■ Shaft Spacing: 4-7/8" (124 mm)

ANTENNA TRIMMER ALIGNMENT

The antenna trimmer alignment can be made without removing any parts.

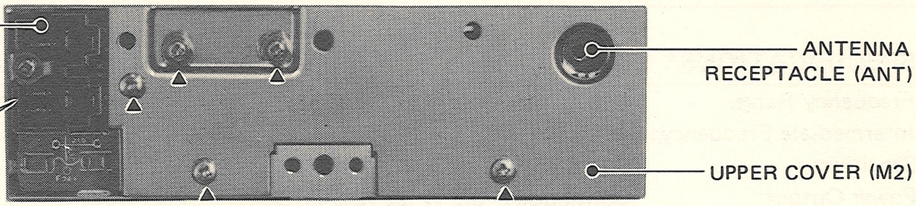
To adjust the antenna trimmer C102, tune in a weak station near 1400 kHz.

Insert a small screwdriver through the hole as shown below, and turn clockwise or counterclockwise.



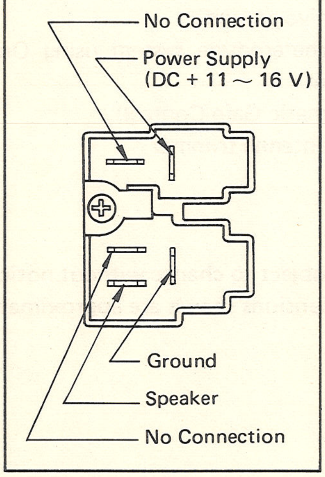
Tune in a weak station near 1400 kHz.
53 70 90 120 160 x10KHz
⊖SCREWDRIVER

REAR TERMINAL CONNECTIONS AND SERVICING NOTICE



POWER SUPPLY/SPEAKER TERMINAL (M11)
ANTENNA RECEPTACLE (ANT)
UPPER COVER (M2)
▲

TERMINAL CONNECTION



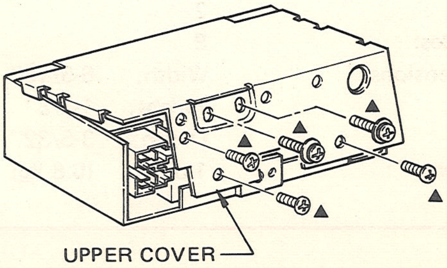
No Connection
Power Supply (DC + 11 ~ 16 V)
Ground
Speaker
No Connection

FUSE . . . . .

- ■ As the car radio is not provided a fuse, check a fuse block of the car if not operating the car radio.

UPPER COVER REMOVAL

- ■ Take off the five screws (▲), and the upper cover can be removed as the parts location on page 2.
- ● After removing the upper cover, the alignment instructions on page 2, can be made.



▲
UPPER COVER

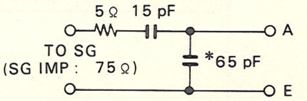
ALIGNMENT INSTRUCTIONS

■ EQUIPMENT REQUIRED

● Signal Generator:	AM 450 ~ 1700 kHz, 400 Hz Mod. @ 30%
● Sweep Generator:	450 kHz
● Antenna Pad:	Refer to Fig. 1.
● Indicator:	Output Meter (AC voltmeter or VTVM)
● Power Supply Voltage:	DC 13.2 V (standard voltage for measurement)

AM (I-F & RF) ALIGNMENT

- Set Volume Control at maximum, and Tone Control in the treble position.
- Connect the signal generator to the antenna receptacle through the antenna pad (Fig. 1).
- Keep the signal generator output low enough to prevent overloading the circuits.


5 Ω
15 pF
A
TO SG
(SG IMP : 75 Ω)
*65 pF
E

*Includes the feeder capacitor.

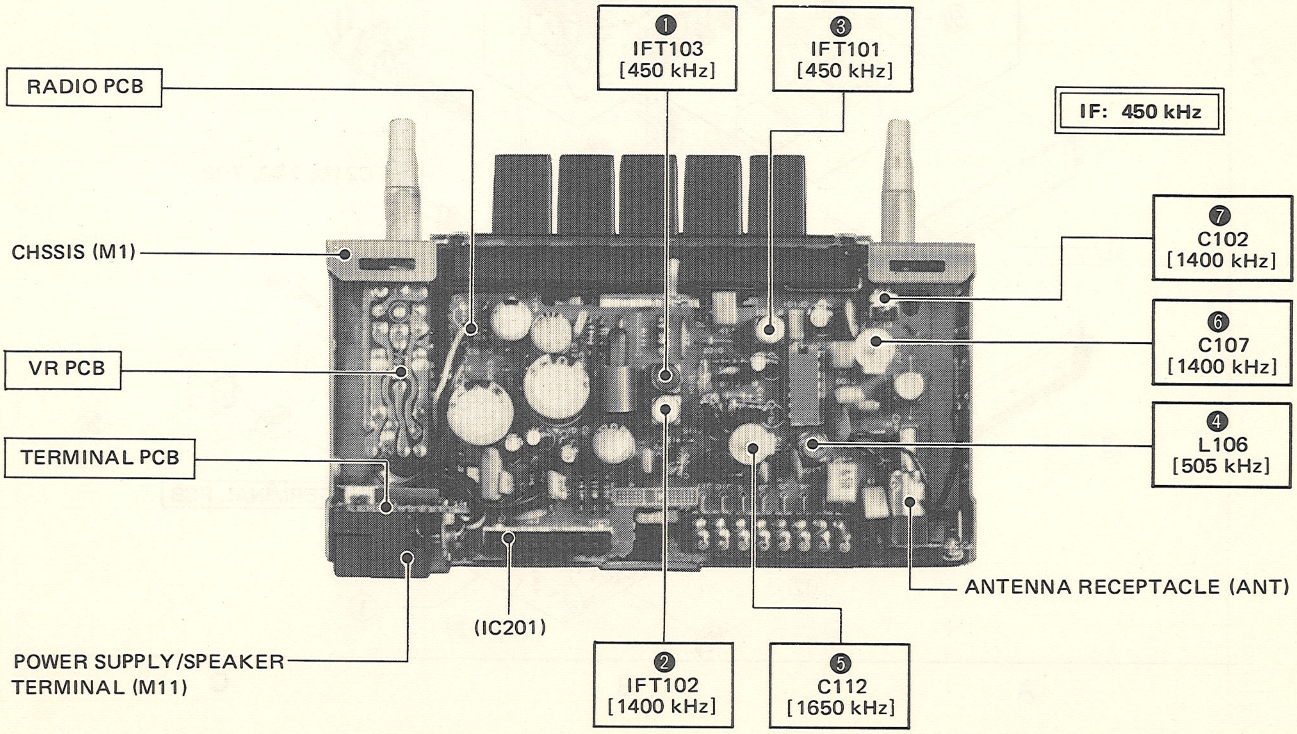
Fig. 1 Antenna Pad

		STEP	GENERATOR FREQUENCY	RADIO-DIAL SETTING	SIGNAL FEED POINT	INDICATOR CONNECTION	ADJUST	REMARKS
AM	IF	❶~❸	450 kHz [Un-modulated or 400 Hz Mod.]	Point of non-interference. (on/about 600 kHz)	Through the pad (Fig. 1) to antenna receptacle.	Output meter across speaker terminals.	IFT103 ≀ IFT101	Adjust for maximum.
	RF	❹	505 kHz [400 Hz Mod.]	Low frq. end stop.	"	"	L106 (OSC)	"
		❺	1650 kHz [400 Hz Mod.]	High frq. end stop.	"	"	C112 (OSC)	"
		❻, ❼	1400 kHz [400 Hz Mod.]	Tune to signal.	"	"	C107 (RF) C102 (ANT)	"

- When radio installed in car, antenna fully extended, tune in a weak station near 1400 kHz and adjust C102 for maximum output.
- Refer to the ANTENNA TRIMMER ALIGNMENT, page 1.
- Repeat steps, two or three times.

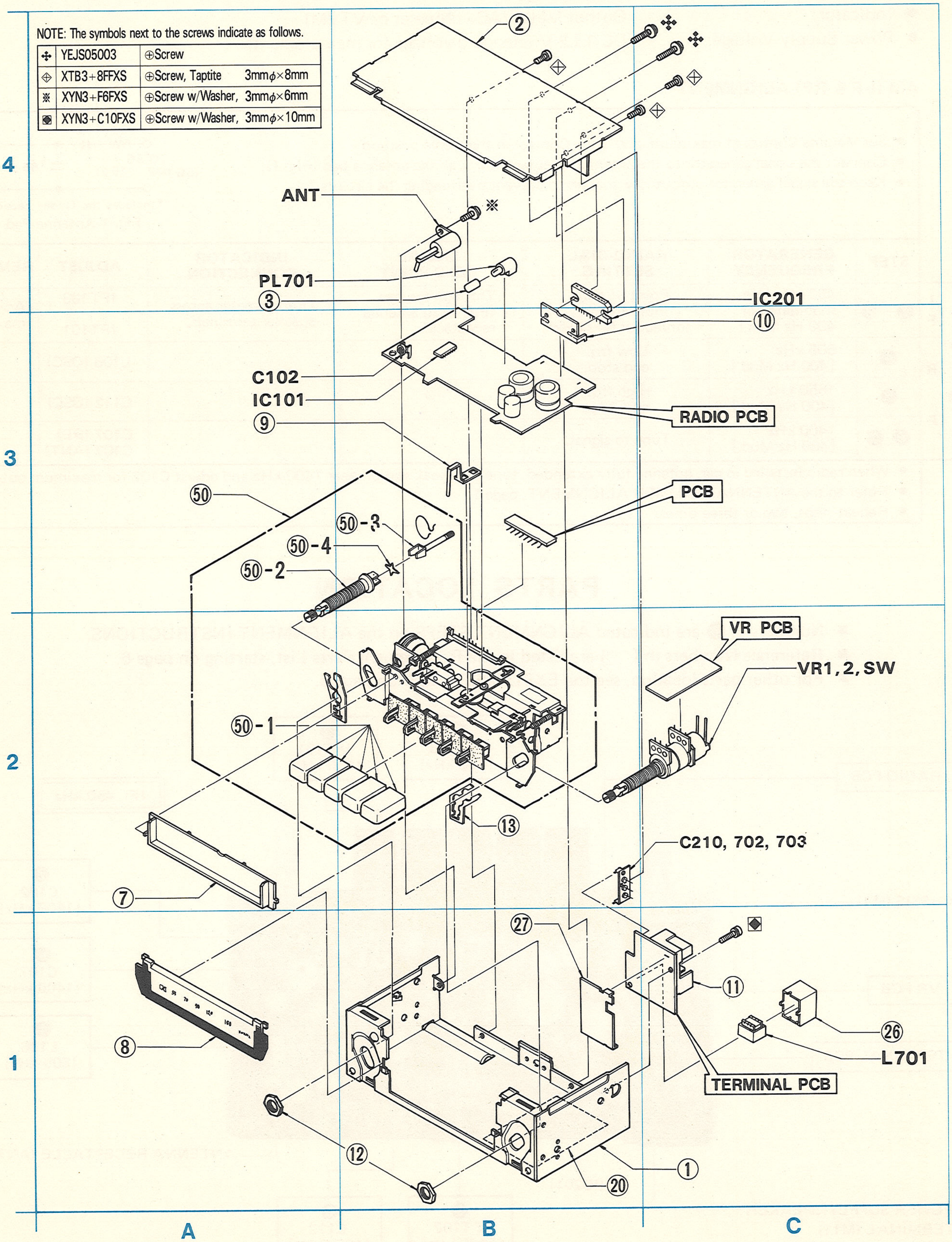
PARTS LOCATION

- ■ Numbers in ● are indicated ALIGNMENT STEPS on the ALIGNMENT INSTRUCTIONS.
- ■ Reference Numbers in (   ) are listed in the Replacement Parts List, starting on page 6.
- ■ For other parts location, see the EXPLODED VIEW on page 3.


❶ IFT103 [450 kHz]
❸ IFT101 [450 kHz]
IF: 450 kHz
RADIO PCB
CHSSIS (M1)
VR PCB
TERMINAL PCB
❼ C102 [1400 kHz]
❻ C107 [1400 kHz]
❹ L106 [505 kHz]
ANTENNA RECEPTACLE (ANT)
(IC201)
POWER SUPPLY/SPEAKER TERMINAL (M11)
❷ IFT102 [1400 kHz]
❺ C112 [1650 kHz]

EXPLODED VIEW

- Numbers in ○ are indicated REF. NO. in the REPLACEMENT PARTS LIST.



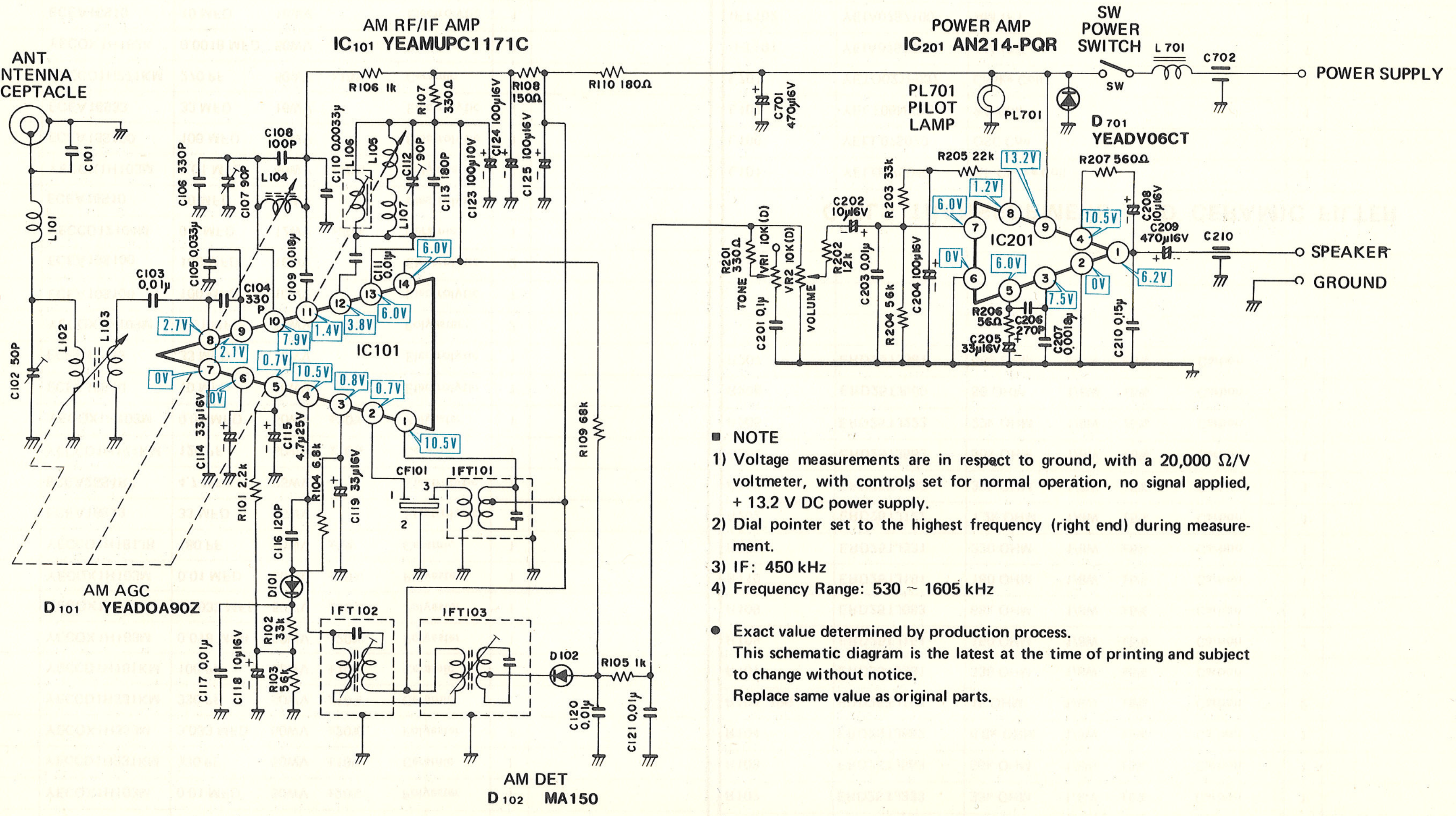
NOTE: The symbols next to the screws indicate as follows.

✣	YEJS05003	⊕Screw	
◈	XTB3+8FFXS	⊕Screw, Taptite	3mmϕ×8mm
※	XYN3+F6FXS	⊕Screw w/Washer,	3mmϕ×6mm
▣	XYN3+C10FXS	⊕Screw w/Washer,	3mmϕ×10mm

②
ANT
PL701
③
IC201
⑩
C102
IC101
⑨
RADIO PCB
㊿
PCB
㊿-3
㊿-4
㊿-2
VR PCB
VR1, 2, SW
㊿-1
⑬
C210, 702, 703
⑦
㉗
⑪
㉖
L701
⑧
TERMINAL PCB
⑫
①
⑳
4
3
2
1
A
B
C

SCHEMATIC DIAGRAM

TOYOTA PART NO. 86120-95A00
MODEL CR-5467.T


ANT ANTENNA RECEPTACLE
AM RF/IF AMP
IC101 YEAMUPC1171C
AM AGC
D101 YEADOA90Z
AM DET
D102 MA150
POWER AMP
IC201 AN214-PQR
PL701 PILOT LAMP
SW POWER SWITCH
D701 YEADV06CT
L701
C702
POWER SUPPLY
SPEAKER
GROUND
TONE
VOLUME
IFT101
IFT102
IFT103
CF101
2.7V
2.1V
0V
0V
0.7V
7.9V
1.4V
3.8V
6.0V
6.0V
10.5V
0.8V
0.7V
10.5V
13.2V
1.2V
6.0V
0V
6.0V
10.5V
7.5V
0V
6.2V

■ NOTE

1) Voltage measurements are in respect to ground, with a 20,000 Ω/V voltmeter, with controls set for normal operation, no signal applied, + 13.2 V DC power supply.
2) Dial pointer set to the highest frequency (right end) during measurement.
3) IF: 450 kHz
4) Frequency Range: 530 ~ 1605 kHz

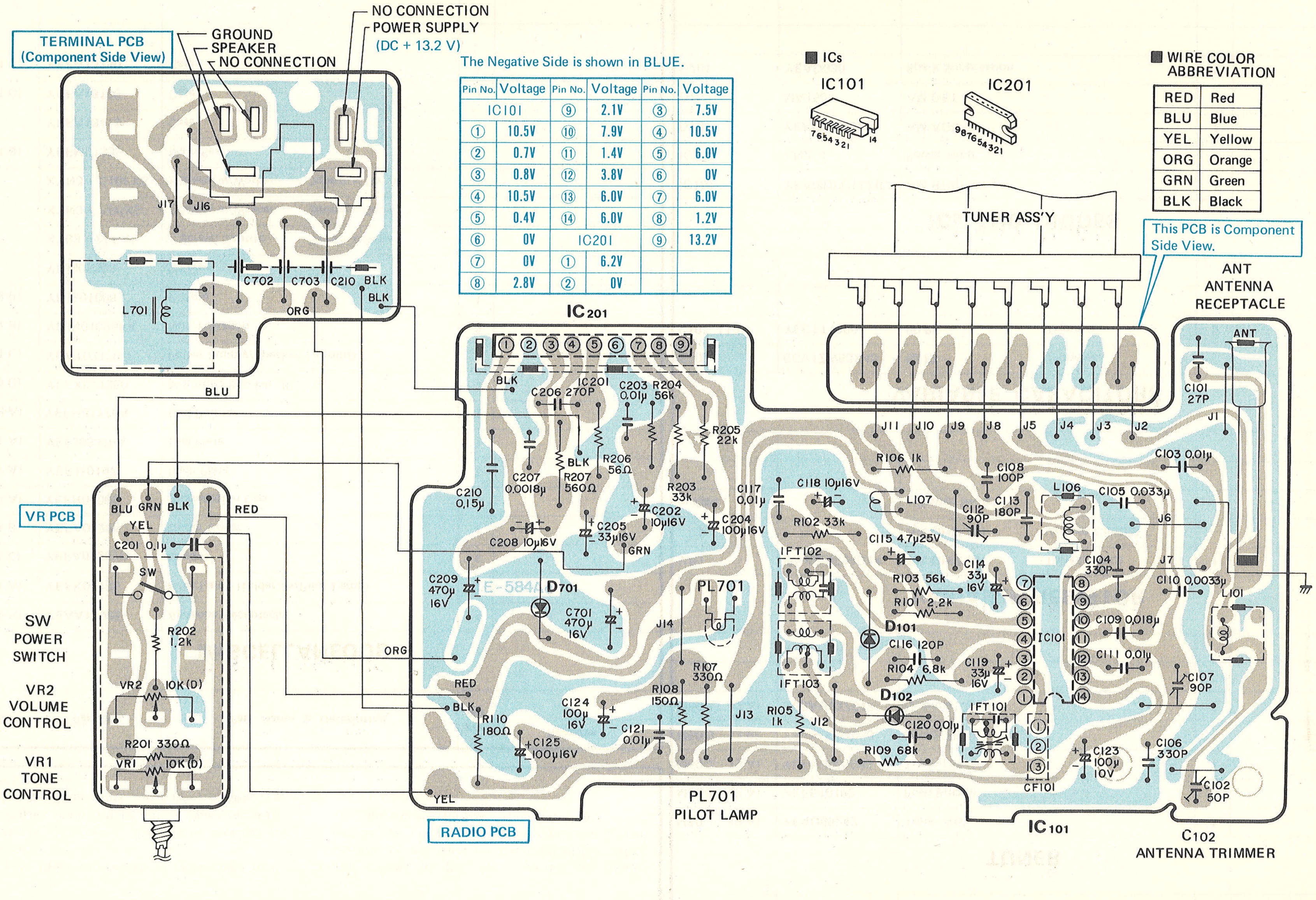
● Exact value determined by production process.
This schematic diagram is the latest at the time of printing and subject to change without notice.
Replace same value as original parts.

AM CAR RADIO

Apr., 1978

WIRING DIAGRAM

TOYOTA PART NO. 86120-95A00
MODEL CR-5467.T


TERMINAL PCB (Component Side View)
GROUND
SPEAKER
NO CONNECTION
NO CONNECTION
POWER SUPPLY (DC + 13.2 V)
■ ICs
IC101
IC201
TUNER ASS'Y
This PCB is Component Side View.
ANT ANTENNA RECEPTACLE
IC201
RADIO PCB
VR PCB
SW POWER SWITCH
VR2 VOLUME CONTROL
VR1 TONE CONTROL
PL701 PILOT LAMP
IC101
C102 ANTENNA TRIMMER
BLU
ORG
RED
BLK
YEL
GRN

The Negative Side is shown in BLUE.

Pin No.	Voltage	Pin No.	Voltage	Pin No.	Voltage
IC101		⑨	2.1V	③	7.5V
①	10.5V	⑩	7.9V	④	10.5V
②	0.7V	⑪	1.4V	⑤	6.0V
③	0.8V	⑫	3.8V	⑥	0V
④	10.5V	⑬	6.0V	⑦	6.0V
⑤	0.4V	⑭	6.0V	⑧	1.2V
⑥	0V	IC201		⑨	13.2V
⑦	0V	①	6.2V		
⑧	2.8V	②	0V		

■ WIRE COLOR ABBREVIATION

RED	Red
BLU	Blue
YEL	Yellow
ORG	Orange
GRN	Green
BLK	Black

AM CAR RADIO

Apr., 1978

Replacement Parts List
Model NO. CR-5467.T (TOYOTA PART NO.86120-95A00)

NOTES:

1. Be sure to make your orders of replacement parts according to this list.
2. Components identified by shaded area have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
3. The column of Ref. No. indicates the located position of the parts on the EXPLODED VIEW, and see the cross section of the horizontal column (1 ~ up) and the vertical column (A up)

Ref. No.	Part No.	Part Name & Description	Pcs Set	Remarks
		MISCELLANEOUS		
ANT (4-A)	YEAA10025	Antenna Receptacle	1	
PL701 (4-A)	YEFK04165	Pilot Lamp Holder (w/Pilot Lamp)	1	
M1 (1-C)	YEFA01207D	Chassis	1	
M2 (4-B)	YEFA03284	Upper Cover	1	
M3 (4-A)	YEFR04085	Illumination Cap	1	
M7 (2-A)	YEFJ10197	Back Plate	1	
M8 (1-A)	YEFJ08370A	Dial Plate	1	
M9 (3-A)	YEFH01176A	Dial Pointer	1	
M10 (3-C)	YEFX021350	Mounting Bracket, IC	1	
M11 (1-C)	YEAT03150	Power Supply/Speaker Terminal	1	
M12 (1-B)	YEJN01028FX	Nut, Hexagon	2	
M13 (2-B)	YEJE01008	E-Ring	1	
M15	YEJS05003	⊕Screw	2	
M16	XTB3 + 8FFXS	⊕Screw, Taptite 3mmφ x 8mm	3	
M17	XYN3 + F6FXS	⊕Screw w/Washer, 3mmφ x 6mm	1	
M18	XYN3 + C10FXS	⊕Screw w/Washer, 3mmφ x 10mm	1	
M20 (1-B)	YEFM01335	Main Seal	1	
M25	YEFA13113	Case	1	
M26 (1-C)	YEFA13100	Case	1	
M27 (1-C)	YEFA13150	Case	1	

Ref. No.	Part No.	Part Name & Description	Pcs Set	Remarks
		TUNER		
M50 (3-A)	YEAU05242	Tuner Ass'y	1	
M50-1 (2-A)	YEFE10192	Push Button	5	
M50-2 (3-A)	YESAU05S085	Tuning Shaft	1	
M50-3 (3-B)	YESAU02Z030	Pinion Shaft	1	
M50-4 (3-A)	YESAU02Z017	Universal Joint	1	
		VARIABLE RESISTOR		
VR1,	EWJ3LBS24D14	10k OHM (D) Tone Control	1	
2		10k OHM (D) Volume Control		
w/SW4		w/Power Switch		
		VARIABLE CAPACITORS		
C102	ECV1ZW50X40	50 PF Trimmer	1	
C107, 112	YECTT1090	90 PF Trimmer	2	
		ICs AND DIODES		
IC101	YEAMUPC1171C	AM RF/IF Amp	1	
IC201	AN214	Power Amp	1	
D101	YEADOA90Z	AM AGC	1	
D102	MA150	AM DET	1	
D701	YEAD030	Spark Suppression	1	

Ref. No.	Part No.	Part Name & Description	Pcs Set	Remarks

CAPACITORS

Ref. No.	Part No.	Part Name & Description	Pcs Set	Remarks
C101	YECCD1H270KM	27 PF 50WV ±10% Ceramic	1	
C103	YECQX1H103M	0.01 MFD 50WV ±20% Polyester	1	
C104	YECCD1H331KM	330 PF 50WV ±10% Ceramic	1	
C105	YECQX1H333M	0.033 MFD 50WV ±20% Polyester	1	
C106	YECCD1H331KM	330 PF 50WV ±10% Ceramic	1	
C108	YECCD1H101KM	100 PF 50WV ±10% Ceramic	1	
C109	YECQX1H183M	0.018 MFD 50WV ±20% Polyester	1	
C110	YECQX1H332K	0.0033 MFD 50WV ±10% Polyester	1	
C111	YECQX1H103M	0.01 MFD 50WV ±20% Polyester	1	
C113	YECCD1H181JR	180 PF 50WV ±5% Ceramic	1	
C114	ECEA16S33	33 MFD 16WV Electrolytic	1	
C115	ECEA25S4R7	4.7 MFD 25WV Electrolytic	1	
C116	YECCD1H121KM	120 PF 50WV ±10% Ceramic	1	
C117	YECQX1H103M	0.01 MFD 50WV ±20% Polyester	1	
C118	ECEA16S10	10 MFD 16WV Electrolytic	1	
C119	ECEA16S33	33 MFD 16WV Electrolytic	1	
C120, 121	YECQX1H103M	0.01 MFD 50WV ±20% Polyester	2	
C123	ECEA10S100	100 MFD 10WV Electrolytic	1	
C124, 125	ECEA16S100	100 MFD 16WV Electrolytic	2	
C201	YECCD12104M	0.1 MFD 12WV ±20% Ceramic	1	
C202	ECEA16S10	10 MFD 16WV Electrolytic	1	
C203	YECQX1H103M	0.01 MFD 50WV ±20% Polyester	1	
C204	ECEA16S100	100 MFD 16WV Electrolytic	1	
C205	ECEA16S33	33 MFD 16WV Electrolytic	1	
C206	YECCD1H271KM	270 PF 50WV ±10% Ceramic	1	
C207	YECQX1H182K	0.0018 MFD 50WV ±10% Polyester	1	
C208	ECEA16S10	10 MFD 16WV Electrolytic	1	
C209	ECEA16V470W	470 MFD 16WV Electrolytic	1	
C210	ECQM1H154MZ	0.15 MFD 50WV ±20% Polyester	1	
C211, 702, 703	YECCL510353	1000 PF x 3 Feedthrough	1	
C701	ECEA16V470W	470 MFD 16WV Electrolytic	1	

Ref. No.	Part No.	Part Name & Description	Pcs Set	Remarks

RESISTORS

Ref. No.	Part No.	Part Name & Description	Pcs Set	Remarks
R101	ERD25TJ222	2.2k OHM 1/8W ±5% Carbon	1	
R102	ERD25TJ333	33k OHM 1/8W ±5% Carbon	1	
R103	ERD25TJ563	56k OHM 1/8W ±5% Carbon	1	
R104	ERD25TJ682	6.8k OHM 1/8W ±5% Carbon	1	
R105, 106	ERD25TJ102	1k OHM 1/8W ±5% Carbon	2	
R107	ERD25TJ331	330 OHM 1/8W ±5% Carbon	1	
R108	ERD25TJ151	150 OHM 1/8W ±5% Carbon	1	
R109	ERD25TJ683	68k OHM 1/8W ±5% Carbon	1	
R110	ERD25TJ181	180 OHM 1/8W ±5% Carbon	1	
R201	ERD25TJ331	330 OHM 1/8W ±5% Carbon	1	
R202	ERD25TJ122	1.2k OHM 1/8W ±5% Carbon	1	
R203	ERD25TJ333	33k OHM 1/8W ±5% Carbon	1	
R204	ERD25TJ563	56k OHM 1/8W ±5% Carbon	1	
R205	ERD25TJ223	22k OHM 1/8W ±5% Carbon	1	
R206	ERD25TJ560	56 OHM 1/8W ±5% Carbon	1	
R207	ERD25TJ561	560 OHM 1/8W ±5% Carbon	1	

COILS, TRANSFORMERS AND CERAMIC FILTER

Ref. No.	Part No.	Part Name & Description	Pcs Set	Remarks
L101	YELQ07S046	RF Choke Coil	1	
L106	YELL07S070	OSC Coil	1	
L107	YELT06N5R6	RF Coil	1	
L701	YETQ021F037	Choke Coil	1	
IFT101	YEIA07S7099	AM IFT	1	
IFT102	YEIA07S7100	AM IFT	1	
IFT103	YEIA07S7101	AM IFT	1	
CF101	YEIN08N5008	Ceramic Filter	1	

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MODEL CR-5467.T (TOYOTA PART NO. 86120-95A00)

ACCESSORIES

Ref. No.	Part No.	Toyota Part No.	Part Name & Description	Pcs Set	Remarks
SP	EAS18D20ST	86160-95401	Speaker	1	
A1	YEFE07081	86125-95A00	Knob, Volume & Tuning	2	
A2	YEFE08072	86124-95A00	Knob, Tone & Dummy	2	
A3	YEFG05284	86211-95400	Rear Bracket	1	

PARTS AVAILABILITY

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